Amendments to the Title:

RADIATION SENSOR~~, WAFER, SENSOR MODULE~~ AND A METHOD FOR MANUFACTURING **[[A]]** THE RADIATION SENSOR

Amendments to the Specification:

Please replace the paragraph beginning at Page 1, line 3, with the following rewritten paragraph:

The invention relates to a radiation sensor, a [[waver]] wafer, a sensor module and a method for manufacturing a radiation sensor according to the preambles of the independent claims.

Please replace the paragraph beginning at Page 1, line 6, with the following rewritten paragraph:

A class of radiation sensors may be designed so that incident radiation, for example infrared radiation (λ>700 nm), causes changes by heating a sensor element which generates an electric signal in accordance with the temperature or a change of the temperature. Since the temperature change will frequently be relatively small a good thermal isolation of the actual sensor element is required to restrict the diffusion of the comparatively low incident amount of heat to non-heat sensitive regions (the thermal short-circuit) to a minimum. It is known to provide a thin membrane on a frame and to form the sensor element on said thin membrane so that the sensor element itself will not directly contact massive heat valleys. A typical embodiment is shown in FIG. 11: a frame, for example of silicon, surrounds a rectangular cavity 112 which may as well be a through hole. A membrane 113 is stretched and fixed above the cavity 112, a sensor element [[104]] 114 being mounted on the membrane so that the electrically effective area is located on the membrane and not above a massive heat

valley. Contacts [[105]] 115 reach under the poles of the sensor element 114 and can be used to electrically extract the resulting electric signals. The bonding pads 115a, b of the contacts are located above the frame, typically above a broadened bar [[101a]] 111a of the frame, so that the membrane 113 is not damaged during the bonding process. Typically the dimensions of the sensor elements include edge lengths of a few millimetres, cavity diameters of 50 to 90% of the edge lengths of the sensor elements and membrane thicknesses of a few micrometers. A disadvantage of this construction is that, due to the corners of the cavity 112, the suspension of the membrane is discontinuous in said corners so that distortions and creases may occur. Above that comparatively broad bridges need to be provided for the bonding pads of the contacts 115 so that the overall construction becomes relatively "large".

Please replace the paragraph beginning at Page 8, line 4, with the following rewritten paragraph:

The dimensions of the radiation sensor may satisfy one or more of the following specifications: height H of the support (in cross section) >50 µm, preferably >200 µm, <1,500 µm, preferably **[[y]]** ≤600 µm, edge length L of one or both edges of the support 1<3 mm, preferably <1.5 mm, preferably <1 mm, diameter D of the cavity >55%, preferably >65%, <90%, preferably <80% of the support edge length L, thickness of the membrane <3 µm, preferably <2 µm, preferably <1 µm.

Please replace the paragraph beginning at Page 5, line 9, with the following rewritten paragraph:

While the cavity in the support of the radiation sensor has fully or partly rounded contours, the outer contour of the support is preferably rectangular or square. However, for example rhombic, triangular or hexagonal outer contours and oval holes or the like are also feasible. In the corner sections of the radiation sensor electric contacts, particularly their bond pats, may be provided. The bond pats may in particular be located at the diagonally opposed ~~corners~~ corners of the radiation sensor, and they are at least partially or fully not disposed above the cavity but above the massive support, particularly at the angle between the round contour of the cavity and the corner of the outer contour of the support. The cavity may be produced by etching from the rear side, particularly by reactive ion etching (RIE) or by DRIE (deep reactive ion etching). ICP etching may also be used (ICP="inductively coupled plasma"). Here high etching rates are obtained.

Please replace the paragraph beginning at Page 17, line 24, with the following rewritten paragraph:

The material from which material is to be removed is preferably a circular crystalline ~~waver~~ wafer having a diameter of at least 10, preferably at least 15 cm.